BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAI'I

In the Matter of PUBLIC UTILITIES COMMISSION Instituting a Proceeding To Investigate the Implementation of Feed-in Tariffs.	)	DOCKET NO. 2008-0273

COUNTY OF HAWAI'I'S RESPONSES TO OTHER THRESHOLD QUESTIONS 4-29 SET FORTH IN APPENDIX C TO THE NATIONAL REGULATORY RESEARCH INSTITUTE'S SCOPING PAPER

EXHIBIT A

AND

CERTIFICATE OF SERVICE

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The Administration of the COUNTY OF HAWAI'I, a political subdivision of the State of Hawai'i ("County"), by and through its attorneys, Corporation Counsel Lincoln S.T. Ashida, and Deputy Corporation Counsel Michael J. Udovic, submits to the Commission its responses to the other threshold issues identified in Appendix C to the Commission's "Scoping Paper" entitled, "Feed-In Tariffs: Best Design Focusing Hawaii's Investigation", prepared by its consultant, National Regulatory Research Institute, and served on the parties herein:

4. **Feed-in tariffs, if approved by the Commission, would join an array of legislative and regulatory initiatives to boost production of renewables in Hawai'i. Those initiatives include PURPA, the renewable portfolio standard, net metering and various distributed generation actions. Are there overlaps, redundancies, gaps among these multiple initiatives? What is the independent purpose of each of these, in relation to the others?**

County's Response:

The purpose of Feed-In Tariffs is to provide another incentive for electrical generation entities to build technology which will be used to provide a reliable source of

electrical power for the State of Hawai'i. While overlaps and redundancies may occur with a wide array of technology, the hope is that few gaps will occur.

The regulatory scheme should not hinder the construction and operation of safe renewable energy sources in the State of Hawai'i. Rather, the regulatory scheme should maximize opportunities for new renewable energy resources to come on line by maximizing the overall menu of options available to both energy producers and the utility.

Process and General Feed-in Tariff Issues

5. *Please explain the criticality of completing the "best-design" phase of this investigation by March 2009 and having project-based FiTs in place by July 2009 as called for in the Agreement.*

County's Response:

Long range planning for the HECO companies as well as other suppliers of electricity would be facilitated by knowing the projected PBFiTS at the earliest possible date. There is currently a "perfect storm of events" occurring — including Hawai'i's geographically isolated position and related dependence on fossil fuel resources based at great distances; recent spikes in fuel costs that are reflective of the volatility of the world's oil market; and the awareness of the severe global climate changes associated with the continued burning of fossil fuels — all of which is driving the rapid expansion of consumer and business interest in alternative and renewable energy sources and creating a compelling market opportunity for the development and expansion of renewable energy resources

6. **Please explain why project-based FiTs are superior to other methods that require a utility to purchase renewable electricity.**

County's Response:

PBFiTS hold promise for the consumer in that a variety of potential production facilities can be considered for implementation.

7. **Please quantify the costs over avoided costs of an open-ended PBFiT program assuming the utility meets the RPS goals set forth in the Agreement.**

County's Response:

The County is unable to address this question at this time.

8. **Please quantify the benefits of lowering oil imports, increasing energy security, and increasing both jobs and tax base for the state mentioned in the Agreement.**

County's Response:

Aside from the environmental and climactic issues associated with the burning of fossil fuels, it is more beneficial to the citizens of Hawai'i to have a source of fuel to be used to produce electrical power available at the local level. Supply disruptions could be mitigated and we would not be held hostage to the whims of foreign governments. There is a tremendous opportunity for the expansion of local green jobs and businesses in the field of energy production to offset some of the current $79.1 million in fuel purchases that leave Hawai'i Island annually. Additionally, the creation of more elasticity in fuel resources and supply sources is recognized as key to a sustainable energy future.

9. **Is the goal to encourage as much use of renewable resources as possible as soon as possible, or is it to encourage the orderly introduction of renewable resources based upon cost-effectiveness?**

County's Response:

Both.

10. **How long a period should exist between mandatory Commission reviews of the PBFiTs?**

County's Response:

Industry standards should be applied.

PBFiT General Design Issues

11. **Do each of the technologies listed as a renewable resource in the RPS legislation require a PBFiT?**

County's Response:

Yes, it would appear so.

12. **Should PBFITs for certain technologies be established now while others are deferred?**

County's Response:

No, all potential sources should be considered.

13. **Should the Commission cap purchases under PBFiTs? If yes, what is the maximum amount? Should individual caps be set for each technology? What period should the cap cover? What is the measurement for the cap (e.g., dollars, percent of sales, kW, or KWh)?**

County's Response:

No.

14. What limitations exist for integrating renewable resources onto the grid? Should these limits affect the PBFiT design or caps, or are they just another cost that developers must consider?

County's Response:

Load projections should be based on demand projections, limits should be considered.

Specific Tariff Design Issues

15. How long should the Commission set for the PBFiT's term of obligation? Should it be different for different technologies? Is there a common basis (e.g., a conservative estimate of expected useful life) for establishing the term of obligation? On what basis should a utility pay for electricity after the term expires?

County's Response:

The term of obligation should be partnered with the life of each facility and should be based upon the particular type of technology to be used at each facility. Following the term of the PBFiT, market rates should apply, or alternatively, the Legislature, Administration and the PUC may have reviewed the existing statewide and individual island energy systems and made amendments to the price structuring that are relevant to the current and projected time horizon.

16. Should PBFiTs require the utility to purchase the project's gross or net output at the PBFiT price?

County's Response:

Net output from the PBFiT to the Utility.

17. How should the utility determine the price paid for renewable energy not covered by a PBFiT (e.g., purchases above the cap price or beyond the term of obligation)?

County's Response:

Market rates should apply.

18. What inflation adjustment, if any, should the PBFiT include, using what base and indexes?

County's Response:

CPI for the effected county should be considered.

19. What milestones (e.g., commercial operations) should the Commission set to determine eligibility for the PBFIT? Are Hawai'i's RPS statute requirements an eligibility requirement? Should utility affiliates be eligible to receive the PBFiT price?

County's Response:

The PUC should consider the applicant's basic business model and stability of the company, including expertise and track record. Also, the PUC should establish benchmarks to secure investment funding, acquisition of land, permits and meet other measurable benchmarks to come on-line and maintain a reliable track record of delivery of power.

20. Please comment on the need for stepped tariffs based upon location, size, fuel mix, and output.

County's Response:

Transmission costs from remote locations should be considered for stepped tariffs. Stepped tariffs are supported provided they are used to maximize the diversity of the types and sizes (large and small), establish good geographic distribution of

renewable systems that will increase the stability and dependability of the utility's overall transmission system

21. Under what circumstances should the PBFiT price be time-differentiated?

County's Response:

Demand based. The needs of the island where the power is produced should be met prior to consideration given to exporting energy to other islands.

22. How highly leveraged (i.e., bearing how much debt compared to equity) are these projects?

County's Response:

The County is unable to comment on this question since it is not a for profit entity.

23. Does a PBFiT create a financing environment through a reliable revenue stream from the ratepayer to the investor, allowing for greater leverage and thus lower cost financing than would be available under an avoided-cost tariff?

County's Response:

Yes.

24. If the PBFiTs are to encourage early development of resources, does the reasonable return need to be set higher for these early tariffs? Are there reasons other than encouraging early development to set the profit margin higher, such as risks associated with early implementation? Is it true *across all project classes*?

County's Response:

1. Yes.

2. Yes. Beyond encouraging early development, it is desirable to maximize

the following: 1) types of fuel resources available; 2) the geographic distribution of those resources; 3) the ownership of those resources; and 4) stimulate new investment and green business and job opportunities within the state.

3. Yes.

25. Does the current "credit crunch" affect the financing costs, including expected profits by equity investors?

County's Response:

It is likely to affect this issue as it has other financing concerns.

Related Issues

26. Please provide a quantitative analysis demonstrating the public interest aspect of the concept that 10% of the utility's purchases under the feed-in tariff PPA should be included in the utility's rate base through 2015. In addition to the overall prudence of the rate base recommendation, please address the 10% and 2015 date included in the Agreement.

County's Response:

The County is unable to comment on this question at this time. While alternative energy production facilities are contemplated at County sites, these production facilities may or may not produce power for feed into the grid.

27. What is the appropriate rate of return for the PBFiT portion of rate base that consists of a mandated purchase with guaranteed recovery and no capital outlay?

County's Response:

Industry standards for rate of return should apply.

28. Are there preferable utility incentives, other than putting PBFiT revenues into the rate base, to encourage the development of renewable resources?

County's Response:

No.

29. Should the PBFIT require developers to assign credits (e.g., investment tax credits, renewable energy credits, and carbon credits) earned from a project to the purchasing utility as a condition of receiving payments under the PBFiT? If not, how should these credits be included in the estimation of a typical project's costs?

County's Response:

Yes.

DATED: Hilo, Hawai'i JAN 2 3 2009.

MICHAEL J. UDOVIC
Attorney for COUNTY OF HAWAI'I

PBFiT Supporting Cost Information

(Submitted by Hawaii County - Department of Water Supply **)**

Responses should reflect typical costs and operations for projects of the stated class and not those for a specific project. All costs should be in 2009 dollars and reflect the unique cost characteristics of developing projects in Hawaii.

Eligible Projects

Technology: Small - Hydro Generation Turbine

Restrictions (if any):

Size (kW)	Location	Other Factor(s)
45 kW	Hawaii County - Puna, Kau, Kohala, and Kona Districts	Project needs to be placed where there is sufficient water flow and elevation drop to power the turbine.

Installed Capital Cost ($/kW)[4]: $12,000 to $16,000 / kW (Provide range and expected cost).

Please provide a complete explanation of the stated costs, including references and a discussion of the impact of the size or location of the plant.

Currently, four (4) hydro generators are being planned - one for each district. Three hydro generators were installed at a cost of $500,000 to $700,000 in 2008.

Expected Service Life (months): 360 months (30 yrs) (Provide range and expected service life).

Please provide a complete explanation of the stated service life, including references, and discuss whether service life would change with variations in output.

The expected service life value is based on the manufacturers specificiations. The turbines were manufacturered by Canyon Industries, Inc., and are patented by SOAR Technologies, Inc.

[1] Costs include total pre-commercial costs of development, including costs such as interest during construction, interconnection costs, and salvage costs (e.g., land sale or reuse, site reclamation, scrap, etc.)

EXHIBIT "A"

Expected Annual Output per kW (kWh): 523,000 kW/yr. (45 kW firm Capacity) (Provide range and expected out)

Please provide a complete explanation of the annual output, including references and discuss whether output is expected to degrade over the project's service life (please quantify expected degradation, if any).

The model used to analyze the amount of energy produced is RETScreen Energy Model for a Small Hydro Project. RETScreen was developed by the Minister of Natural Resources Canada. The generator is scheduled for an overhaul at year 20, although the expected degradation is expected to be minimal.

Fixed Operating Costs ($/year): $5,000/year for spare parts (Provide range and expected costs)

Please provide a complete explanation of the fixed operating costs, including references and a discussion about whether the costs should be expected to vary with project size (please quantify any expected variation). Discuss any inflationary adjustments that may be appropriate.

At the end of 20 years - the cost to overhaul the generator is estimated at $7,500 in 2008 $$.

Variable Operating Costs (cents/kWh): _____ (Provide range and expected costs)

Please provide a complete explanation of the variable operating costs, including references and a discussion about any inflation adjustments that may be required and adjustments for renewable or environmental credits.

Public agencies are not currently allowed the benefit of environmental tax credits. It is unknown if public agencies will benefit from greenhouse gas emission reduction credits.

Reasonable Profits (%)[5]: 14 percent Return on Investment as

Please describe how this figure was determined, including capital structure, cost of debt and equity, tax rates, and the benefits or lack thereof of PBFiTs on access to capital markets compared to avoided-cost purchase rates. Please provide references or citations.

The financial feasibility is assumed as follows: Simple Payback = 9 years. Year-to-positive cash flow = 7.4 years. The Department of Water Supply would not profit from generating electricity, rather, the funds would get rolled into reducing water rates to the service customers. A nine-year pay back is reasonable because of the risks associated with the placement and operation of the unit. The functionality of the Hydro Generators is dependent on population (and water service) growth, and the configuration of the Department's overall water system operations that needs to dynamically change with water service needs.

Summary Table of Cost Data[6]

Presented by:_____

Project Definition	Capital Costs ($/kW)	Expected Life (Years)	Annual Output per kW (kWh)	Fixed Operating Costs($/year)	Variable Operating Costs (cents/kWh)	Profit (%)
Wind - Onshore						
Wind – Offshore						
Solar PV – Large						
Solar PV – Small						
Falling Water	$12,000 to $16,000 / kW	30 years	523 MWh	$5,000 + one-time $7,500 for overhaul at 20 years.		14 % ROI

[6] Please insert the data used in the detailed sheets, using the preferred value and not the ranges. Insert additional lines as needed.

Biogas						
Geothermal						
Ocean						
Biofuels						
Biomass						
Hydrogen						

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that copies of the foregoing document was served upon the following by mailing the same, postage prepaid, on January 23; 2009:

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DATED: Hilo, Hawai'i JAN 23 2009.

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January 23, 2009

The Honorable Carlito Caliboso, Chairman
and Members of the Public Utilities Commission
465 South King Street
Kekūanaō'a Building, 1st Floor
Honolulu, HI 96813

Re: *Instituting Proceedings to Investigate the Implementation of Feed-In Tariffs; PUC Docket No. 2008-0273*

Dear Chairman Caliboso and Member for the Commission:

The County of Hawai'i submits the following response to the threshold questions in Appendix "C" of the National Regulatory Research Institute Scoping Paper. As required, an original and ten copies are filed with this response.

The County of Hawai'i has also attached PBFIT Supporting Cost Information for Hydro facilities constructed by the Department of Water Supply as Exhibit "A".

If you have any questions, please do not hesitate to contact me.

Sincerely,

MICHAEL J. UDOVIC
Deputy Corporation Counsel

MJU:stw
Cc: Service List
Encls.

S:\lit\PUC\corres\ltr to PUC response Appendix C questions\1-23-09\MJUstw